



Product	Gestetner	Lanier	Ricoh	Savin
G157	SP C210SF	AC031cn	SP C210SF	SP C210SF

Launch Date: 03/15/2006

S/N Configuration: Q72xxxxxxxxx

Training Information

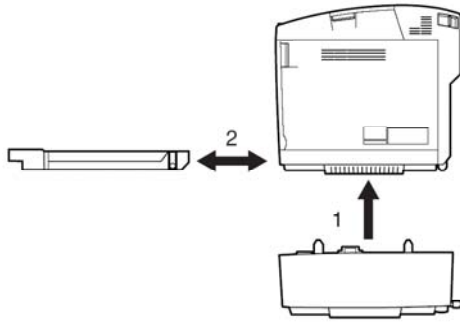
- Auto-certification - RFG-eSource users may obtain the components of the G157 Service Documentation Update Package by performing a search using the G157 product code.
- Auto-certification - Update package can also be obtained from your Regional Order Entry Department.
- Technical Professionals who are not currently certified on the G108 product can be trained on the G157 by completing the G157/G108 Self-Pace WBT Training Program.

Product Concept

- **High Performance**
Print Speed:
Monochrome 31ppm, Color 8ppm
Copy Speed:
Monochrome 31cpm, Color 8cpm
(single doc / multi-prints)
Monochrome 21cpm, Color 7cpm
(multi docs / single-prints)
- **Thick Paper Support**
Paper Weight 16-55 lbs. (using standard tray)
- **Full Functioned Laser Printer Based Color MFP**
Copying: 600x300 dpi normal, 600x600 dpi photo color
Printing: 600x600 dpi normal, 2400dpi fine mode, GDI
Scanning: Scan to Twain, up to 1200x2400 dpi (platen)
Faxing: ADF, Super G3



Machine Configuration



1. Paper Feed Unit Type 1000

Holds up to 530 sheets of paper. Only one paper feed unit can be installed. The installed paper feed unit is designated as Tray 2.

2. Paper Cassette Type 1000 (Legal Tray)

Replaces the Standard Tray (Tray 1). Allows for legal size printing.

No.	Unit	Machine Code
	Main Unit	G157
1	Paper Tray Unit Type 1000	G389
2	Paper Cassette Type 1000 (Legal)	G391

Controller

No.	Unit	Machine Code
1	Memory Unit Type C 64 MB 128 MB 256 MB	- G330 G331 G332
2	IEEE1284	Standard
3	Ethernet	
4	USB 2.0	
5	Optional Interface	None

Memory Configuration

Maximum memory: 576MB
Minimum memory: 64MB

Standard	Extended	Machine Code
64MB	64 MB	G330
	128 MB	G331
	256 MB	G332

Note: Maximum memory can be extended to 576MB by installing a 512MB SO-DIMM (procured locally)

General Specifications

Configuration: Desktop

Technology: Laser beam scanning, electro-photographic printing, single-component toner development, one drum method

Copy Resolution/Speed: Color copy at 600x300 dpi, 7cpm color; 21cpm B&W

Print speed: See table below

First print speed: See table below

Dimensions: (W x D x H): 19 x 17.4 x 21 inches

Weight: Approximately 76.7 lb

Non printable area: Side 3mm; lead and trail edge 4mm (The printable area may vary depending on paper size, printer language and printer driver settings.)

Max original size: Platen 8.5x11, ADF 8.5x14

Rating power specifications: 120V, 60Hz

Power consumption: Max 1300W; Energy Saver 16W; Average printing 615W, waiting 155W

Warm up time: Less than 45 seconds

Energy star mode: Selectable 0/30sec/5/15/30/45/60 minute increments

Safety standard: UL1950/1955 Third Edition CSA-22.2 no.950-95

EMI: FCC47 CFR, Chapter I, part 15, Class B

Environmental standard: Energy star - tier 2 specifications

Sound power level: Standby: 54dB; Printing: 67dB

Reduction of environmentally sensitive materials: RoHS Compliance; hexavalent chrome, lead, polyvinyl

Duplex: Yes, manual duplex

GDI Controller

CPU: VR5500A 266Mhz

Print Resolution: 600x600, Fine mode 1200x600

RAM: Standard 64MB, Max 576MB; one slot available for 512MB expansion (obtained locally)

Memory type: DDR-SDRAM (SO-DIMM) PC100Mhz 64bit non-ECC/Parity 144 pin

HDD: HDD not utilized for this model

Scanner resolution: 1200x2400dpi (ADF 1200x600dpi)

Windows OS: Windows 98, Me, 2000, XP

Mac OS: 9.1 or 9.2, OS X (10.2 or later)

Unix OS: Not supported

Network Interface: Standard: IEEE 1284, USB 2.0, Ethernet

Network Interface Optional: None

Fax

Compatibility: ITU-T Group 3

Coding system: MH/MR/MMR/JBIG

Modem speed: Automatic Fallback: 33600 bps

Document size: Platen max length 11.7" ADF Width 5.8"-8.5", length 5.8"-14"

Scanning width: Max 8.2"

Printing width: Max 8.2"

Gray scale: 256 levels

Polling type: Standard, Sequential

Contrast control: Automatic/light/dark (manual setting)

Resolution: Horizontal 203 dot/inch (8 line/mm) / Vertical standard 98 dot/inch (3.85 line/mm)

One touch dial: 16 (8x2)

Speed dial: 200 stations

Broadcasting: 266 stations

Automatic redial: 1 time after 5 minutes

Auto answer: 0, 1, 2, 3, or 4 rings

Communication source: Public switched telephone network

Memory transmission: Up to 400 pages

Out of paper reception: Up to 400 pages

Internet fax: Yes

PC fax utility: Yes

Scanner

Color/Black: Color/Black

I/F: USB2.0, 10/100 Base-TX, IEEE1284

Twain compliant: TWAIN, WIA

Color Depth: 48bit color processing (input), 24bit color processing (output)

Resolution: Up to 9600x9600 dpi (interpolated)

Platen; up to 1200x2400 dpi (optical)

ADF; up to 1200x600 dpi (optical)

Document size: Platen; max width 8.5" max length 11.7"

ADF max width 5.8-8.5" length 5.8"-14"

Scanning width: max 8.5"

Gray scale: 256 levels

Scanner utilities/drivers: TWAIN driver, Scanner utility (Control Center), Image viewer (Paper Port 9.0SE), OCR S/W (OmniPage OCR)

Printing Speed

Black and White Mode		Print speed		First print speed
Paper Type	Paper Weight	LT	LGL	LT
Plain paper	60-90g/m ²	31	16	14sec
	90-105g/m ²	5.5	5.5	19sec
Thick paper	105-163g/m ²	4.2	4.2	22sec
	163-210g/m ²	3.5	3.5	25sec
Color Mode		Print speed		First print speed
Paper Type	Paper Weight	LT	LGL	LT
Plain paper	60-90g/m ²	8	8	20sec
	90-105g/m ²	3.6	3.6	25sec
Thick paper	105-163g/m ²	3.0	3.0	27sec
	163-210g/m ²	2.6	2.6	30sec

Supported Paper Weight Specifications

Standard Tray: 16 lb. - 55 lb. Bond (60 to 210g/m²)
 Optional Tray: 16 lb. - 28 lb. Bond (60 to 105g/m²)
 Legal Tray: 16 lb. - 55 lb. Bond (60 to 210g/m²)

Recommended Paper

Plain Paper

Type	Brand	WT.	Size
	Hammermill Copy Plus	20 lb. Bond	8.5" x 11" 8.5" x 14"
	Hammermill Tidal DP	20 lb. Bond	8.5" x 11" 8.5" x 14"
	Hammermill Saving DP	20 lb. Bond	8.5" x 11" 8.5" x 14"
	Georgia Pacific Spectrum DP	20 lb. Bond	8.5" x 11" 8.5" x 14"
Plain	Georgia Pacific Micro Print Multipurpose	20 lb. Bond	8.5" x 11" 8.5" x 14"
	Champion Multi Purpose	16 lb. Bond	8.5" x 11" 8.5" x 14"
	Champion Multi Purpose	20 lb. Bond	8.5" x 11" 8.5" x 14"
	Champion Multi Purpose	24 lb. Bond	8.5" x 11" 8.5" x 14"
	XEROX X4024	20 lb. Bond	8.5" x 11" 8.5" x 14"
	XEROX X9000	20 lb. Bond	8.5" x 11" 8.5" x 14"

Recommended Paper

Special Paper

				Paper Type	Plain Paper/Thick Paper Type
Glossy Paper ^{*1}	Great White Laser Glossy Photo Paper [Brightness 94] (# 86300)	32 lb. Bond	8.5" x 11"	Glossy	
	Wausau Exact Gloss Coated (# 97201)	80 lb. Text	8.5" x 11"	Glossy	
Coated Matte Paper	Wausau Exact Matte Coated (# 99201)	80 lb. Text	8.5" x 11"	Glossy	
Adhesive Label	Avery White Mailing Labels (# 05160)	---	8.5" x 11"	Label	
	Avery White Mailing Labels (# 05163)	---	8.5" x 11"	Label	
Transparency	3M CG3700 & CG3720 (for color laser printers, w/o stripe)	---	8.5" x 11"	OHP Transparency	
Recycled Paper	Georgia Pacific GeoCycle 30% Recycled	20 lb. Bond	8.5" x 11"		
Thick Paper	Eastern Paper, Pristine High Yield Index (#081-01930)	110 lb. Index (199 g/m ²)	8.5" x 11"	Thick	163-210g/m2, 43-55lb
Envelopes ^{*2}	Westvaco Laser Quality Envelopes (#CO125) ^{*3}		COM10	Thick	Thick Envelopes
	Westvaco Laser Quality Envelopes (#CO130)		COM10	Thick	Thin Envelopes
	KENTWOVE No.10)		COM10	Thick	Thin Envelopes
	Quality Park Business Envelope (# qua11112) ^{*3}		COM10	Thick	Thin Envelopes
	Quality Park Business Envelope (# qua11184)		COM10	Thick	Thin Envelopes

^{*1}. Uneven density appears in partial area.

^{*2} Wrinkles frequently appear when placing flap onto the right.

^{*3} Wrinkles occasionally appear when placing flap onto the left.

Additional Comments

Ricoh has tested the paper types on the previous page. However, **Ricoh recommends that end users test any paper before purchasing large quantities.** The print quality may differ according to the temperature, humidity and printing applications in which the paper is used. In addition, paper specifications or methods of manufacturing are subject to change, over which Ricoh has no control.

When using special paper, feed from the standard tray and select the proper paper type from the printer driver and the control panel. In addition, when using thick paper or envelope, select the proper Plain Paper Type or Thick Paper Type on the control panel. Printing numerous sheets of special paper in a short amount of time may create some printing problems. Exclusive printing of special paper may result in more frequent service calls, and may significantly reduce the maximum yield of maintenance kits. Ricoh's reliability data assumes only occasional use of special paper.

Paper Not Supported By This Printer

Some types of paper may not perform well or may cause damage to the machine. Do not use the following paper:

- Highly textured
- Extremely smooth or shiny
- Curled or warped
- Coated, or with a chemical finish
- Damaged, creased or folded
- That exceeds the recommended weight specification
- With tabs or staples
- Letterheads using low temperature dyes or thermography
- That is multipart or carbonless
- That is designed for inkjet printing

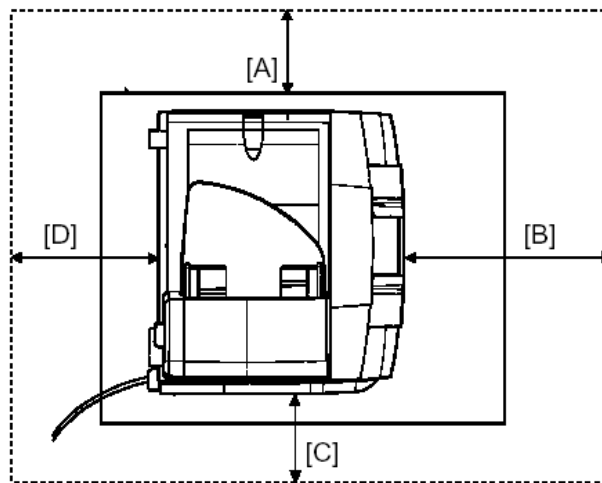
Printer Drivers and Functions

Function	Windows 9x / Me	Windows 2000 / XP	Macintosh OS9.1, 9.2	Macintosh OS X
Job Binding	N	N	N	N
Send to Document Server	N	N	N	N
Sample Print	Y	Y	N	N
Locked Print	Y	Y	Y	Y
Reduce/Enlarge (Scaling)	Y	Y	Y	Y
Reduce/Enlarge Centering	N	N	N	N
Collate	Y	Y	Y	Y
Layout (N-up)	Y	Y	Y	Y
Poster	Y	Y	N	N
Manual Duplex	Y	Y	N	N
Punch	N	N	N	N
Staple	N	N	N	N
Front Cover Sheet	N	N	N	N
Front and Back Cover Sheets	N	N	N	N
Slip Sheet	N	N	N	N
Chaptering (Page Layout)	N	N	N	N
Chaptering (Single Page Inserting)	N	N	N	N
Chaptering (Page Block Inserting)	N	N	N	N
User Defined Pages	N	N	N	N
Tab Stock Printing	N	N	N	N
Mirror Image Print	Y	Y	Y	Y
Negative Image Print	N	N	N	N
Dithering	Y	Y	Y	Y
Edge Smoothing	N	N	N	N
Toner Saving	Y	Y	Y	Y
Watermark	Y	Y	Y	Y
Form Overlay	N	N	N	N
Header/Footer	N	N	N	N
Adjust image position	N	N	N	N
Binding Margins	Y	Y	Y	Y
User ID	N	N	N	N
User Code	N	N	N	N
Rotate Print	N	N	N	N
Reverse Order Print	N	N	Y	Y
Do not print Blank pages	N	N	N	N
Edge to Edge Print	N	N	N	N

Utilities and Drivers CD-ROM

Contents	Windows Environment
Printer Driver	Windows 95/98/Me, NT4.0, 2000, XP
Status Monitor	
Remote setup management tool	
Scanner driver	
Image viewer (PaperPortSE)	
OCR S/W (OmniPage)	
PC Fax S/W	Macintosh
Printer Driver	

Machine Space Requirements



[A] (Right): 20"

[B] (Front): 28"

[C] (Left): 8"

[D] (Rear): 14"

NOTE: The space necessary to perform maintenance is included.

Machine Level

Front to back: 1 degree or less

Left to right: 1 degree or less

Installation Requirements

Environment

1. Temperature range: 50 - 90.5°F
2. Humidity range: 15 - 80%RH
3. Do not install the machine in an area that is exposed to direct sunlight.
4. Do not install the machine in a space with poor airflow.
5. Do not expose the machine to a sudden temperature change, which include:
 - Direct cool air from an air conditioner
 - Direct heat from a heater
6. Do not install the machine in an area that can be exposed to corrosive gas.
7. Install the machine at a location lower than 8200 ft.
8. Install the machine on a strong, level base.
9. Do not install the machine in an area that can be subjected to strong vibrations.

Power Requirements

1. Input voltage level: 120 V, 60 Hz
2. Permissible voltage fluctuation: $\pm 10\%$
3. Do not put or place anything on the power cord

Transporting The Printer After Installation

1. You need two or more people to move the machine. The machine weighs approximately 77lbs without optional units. Before you turn off the main power, move the CIS to the shipping position with Maintenance function 06. **Note:** End users can perform maintenance function 06 by themselves. Remember to inform them to use this function before they move the machine.
2. Keep the machine level while you move it.
3. Put the machine on a flat area. Make sure that the whole part of the base supports the weight of the machine.
4. Whenever possible, use the padding provided in the original package to repack machine.
5. Remove the following units and components:
 - Photoconductor unit
 - Optional paper feed unit
 - Paper**NOTE:** Do not remove the waste toner bottle. If you remove it, waste toner may fall from the waste toner path.
6. Protect the photoconductor unit surface with paper or cloth.
7. Clean the units accessible and components in the printer.
8. Secure the paper tray and all exterior covers with appropriate tape.

Reliability Information

ACV: 1.2k prints / 2.64k dev.

Color Ratio: 40%

Max CV: 2k prints

MCBF Target (mainframe): 34.3k prints / 75.43k dev

EM ratio/Call ratio: 0.035 / 0.061 (*A), 0.035 / 0.035 (*B)

Note: The above items are calculated based on the following conditions:

A4 (LT short-edge feed), 5% image coverage ratio, 2P/J

*A: Fusing units replaced by technician

*B: Fusing units replaced by users

Consumable Yields

Toner Yield	
Toner	Yield
Color	6.5K prints
Black	9.8K prints
Starter Toner Yield	
Color	3.0K prints
Black	5.0K prints

User Replaceable Item Yield	
	Yield (at 2 pages per job)
OPC Belt Unit	60K Developments
Waste Toner Bottle	11K Developments

Notes:

- The number of developments determines the components usable life. The figures in the table are calculated under the following conditions:
LT SEF, 5% image coverage ratio, continuous use, color ratio 40%
- The environment is standard temperature and humidity.
- This yield number may change depending on the circumstances and printing conditions.

Preventive Maintenance

User Maintenance/Page Count. This table lists the components that require maintenance work when the copier has output a certain number of pages.

Component	3.7KP	13.2KP	EM	Remarks
Registration Roller			C	
Waste Toner Bottle	R			Note 1
OPC Belt Unit		R		Note 1, 2

Key: C: Clean, R: Replace, L: Lubricate, I: Inspect, KP = 1,000 prints

- The figures in the tables above are calculated under the following conditions:
LT SEF, 5% image coverage ratio, two pages per job, 50% color ratio
- When replacing the OPC Belt Unit the User Function 74 (OPC Belt) must be performed.

Service Maintenance

Page Count. The table lists the components that need maintenance work when the printer has output a certain number of pages.

Key: C: Clean, R: Replace, L: Lubricate, I: Inspect, KP = 1,000 prints

Main Frame

Component	47KP	90KP	120KP	Remarks
Fusing Unit	R			Note 1
Transfer Belt Cleaning Unit			R	Note 3
Transfer Roller			R	Note 3
Paper Feed Roller			R	Note 3
Separator Pad			R	Note 3
Transfer Belt Unit			R	Note 2, 3

Paper Feed Unit

Component	47KP	90KP	120KP	Remarks
Paper Feed Roller		R		
Separator		R		

- The number of developments determines the components usable life. The figures in the tables above are calculated under the following conditions:
LT SEF, 5% image coverage ratio, two pages per job, 50% color ratio (number of cycles are also considered in this formula)
- The number of developments decides the actual life. The values in this table are calculated for the conditions above.
- These are yield parts only. But the expected yield is the same as the machine durability under the target conditions.

Necessary Settings

The PM counter initialization (Service Mode > 36 Clear Care) must be performed after the following units are replaced:

- Transfer Belt Unit
- Transfer Roller
- Transfer Belt Cleaning Unit
- Paper Feed Roller
- Separator Pad
- Fusing Unit

Expected yield based on P/J

Item	Expected Yield			
	1P/J	2P/J	3P/J	5P/J
Waste Toner Bottle (maintenance Kit)	3.54k prints (7.8k dev.)	4.18k prints (9.2k dev.)	4.45k prints (9.8k dev.)	4.59k prints (10.1k dev.)
OPC Belt Unit (Maintenance Kit)	10.9k prints (24k dev.)	15k prints (33k dev.)	17.7k prints (39k dev.)	19.5k prints (43k dev.)
Fusing Unit (Service Parts)	28k prints	47k prints	55k prints	60k prints

Note: The figures in the tables above are calculated under the following conditions: LT SEF, 5% image coverage ratio, 40% color ratio

Total Counter Information

The total counter can be viewed on the display panel or printed out. Counters that can be accessed: total page, fax, print, and copy count.

- To view the counters on the Operation panel: Press Menu/Set, 7, 2.
- To print out counters: Press Menu/Set, 5, 5, black start. The User Settings List will be output.



Example of User Settings List

TOTAL :000816
COPY :000060
PRINT :000735
FAX/LIST :000017

Firmware

Firmware is updated via Parallel Interface Cable only. The table lists the firmware program used by this machine.

Firmware	Program Name	Display
Controller Firmware	LZ0732_A.upd	A0511141709.14F7

Note: Example: A0511141709:14F7 is version A, which was created in 2005, on November 14th at 17:09. 14F7 is the check sum.

Order Numbers

Name/Description	EDP/ID number			
	Gestetner	Lanier	Ricoh	Savin
Paper Feed Unit Type 1000	402067	481-0847	402067	402067
Paper Cassette Type 1000	402069	481-0849	402069	402069
Memory Unit Type C 64MB	400716	481-0518	400716	400716
Memory Unit Type C 128MB	400717	481-0519	400717	400717
Memory Unit Type C 256MB	400718	481-0520	400718	400718
Color LP Toner Type 140 K	402070	480-0264	402070	402070
Color LP Toner Type 140 C	402071	480-0265	402071	402071
Color LP Toner Type 140 M	402072	480-0266	402072	402072
Color LP Toner Type 140 Y	402073	480-0267	402073	402073
PCU Type 140	402074	480-0268	402074	402074
Waste Toner	402075	480-0269	402075	402075
G157 Main Unit	402531	479-1680	402531	402531
Branding Kit	402579	-	-	402578

Part Information

Item	Part Number	Expected Yield
Fusing Unit	V128622	47KP
Cleaning Roller PU	V128404	120KP
Transfer Roller	V128488	120KP
Paper Feeding Roller	V126142	120KP
Separator Pad	V128468	120KP
Transfer Unit	V128463	300KD
Optional Feed Unit Parts		
Paper Feeding Roller	V128539	90KP
Separator Pad	V128540	90KP

Special Tools

Part Number	Description	Q'ty
No special tools required		

Documentation Order Numbers

Manual	Order number
Service Manual	002643MIU
Parts Catalog	002644MIU
Service Documentation Update Package	002642MIU

Contact Information

Resources	Contact
Technical Services Call Center (Hotline)	Ricoh: (800) 537-4264 Savin/Gestetner: (800) 291-6044 Lanier: (800) 333-3147
Application Help Desk (Software Issues) Phone Card order numbers	Ricoh: 2 Calls 000781MIU, 5 calls 000900MIU Savin: 2 Calls 12992, 5 Calls 12993 Gestetner: 2 Calls 12994, 5 Calls 12995
RFG-eSource	http://www.rfg-esource.com/
Technology Solutions Center	http://www.tscweb.net
Savin iLINC	http://w3.savin.com
Gestetner ILINE	http://w3.gestetnerusa.com
Headquarter Web Sites	Ricoh Corporation: http://www.ricoh-usa.com Savin Corporation: http://www.savin.com Gestetner Corporation: http://www.gestetnerusa.com Lanier Corporation: http://www.lanier.com
National Reclamation Center	(973) 808-0450 / http://www.nrc-usa.com
Fax On Demand	(973) 808-3590
Material Safety Data Sheets	(800) 336-MSDS (6737)
Eastern Training Center	(973) 882-2200 http://www.ricohuniversity.com
Western Training Center	(714) 566-3692

Version

- 1.0 Original
- 1.1 Added photo to page 1
- 1.2 Updated counter information on page 14
- 1.3 Updated Fuser part number on page 16